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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,720	12/18/2000	Christopher L. Darling	MS1-681US	4181

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EXAMINER

HO, ANDY

ART UNIT PAPER NUMBER

2194

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,720

Applicant(s)

DARLING ET AL.

Examiner

Andy Ho

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed 8/9/2006.
2. Claims 1-57 have been examined and are pending in the application.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/30/2006 has been entered.

Drawings

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 20 and 37-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A computer readable medium having instructions thereon which when executed perform the steps of the methods of the claims would normally be considered statutory. However, the specification defines "computer readable medium" as including non-statutory media such as carrier wave, RF, infrared... (Specification, line 23 page 31 to line 8 page 32) which is incapable of being touched or perceived absent the statutory medium through which they are conveyed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13, 15, 20-32, 34, 37-43, 46-51 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gossler U.S Patent No. 5,799,173 in view of Mangipudi U.S Patent No. 6,728,748.

As to claim 1, Gossler teaches a method comprising determining present members (servers, line 42 column 4) of a load-balancing cluster (dynamic workload balancing method provided by the queuing monitor 85 or any other queuing monitor order to employ an optimized number of servers for each service unit to be monitored, lines 40-43 column 4);

monitoring (the queuing monitor 85 monitors and controls the servers for each one of the service units of the service point, line 16-19 column 3) availability of one or more members (the minimum and the maximum number of the servers to be available to execute the processes, lines 4-16 column 4) of the cluster (a plurality of servers, line 59 column 2).

Gossler does not explicitly teach dynamically determining the members, a node managers, application layer availability, and observed from a client perspective.

Mangipudi teaches a system of load balancing (Figs. 2-3) which includes nodes (servers within a cluster, Figs 2-3 and associated specifications) and a node manager (intelligent agent for each cluster of servers, Fig. 3 and associated specifications) wherein the application layer of the servers and their availability are being dynamically determined and monitored from a routing host located outside of the cluster and the monitoring being performed by the routing host outside of the cluster which is communicatively linked to the node manager in the cluster, such that the monitoring is from a client perspective to detect an error that may impact the application-layer availability as it appears to the routing host from outside of the cluster (lines 28-65 column 4; Figs. 2-3 and associated specifications).

It would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified Gossler reference to include the teachings of Mangipudi reference because by using a client, which is a routing host, outside of a cluster of servers to communicate with a node manager and monitor application layer of the servers, the system could direct client requests to the appropriate server as disclosed by Mangipudi (lines 28-65 column 4; Figs. 2-3 and associated specifications).

As to claim 2, Gossler as modified further teaches exocusterly (the queuing monitor 85 is not part of the cluster of service units and servers, lines 11-59 column 3, Figs 2-3) controlling activity state of the members of the cluster (the queuing monitor 85 employs an optimized number of servers for each service unit, lines 37-38 column 4; temporary server will be terminated after finished processing the processes, lines 52-65 column 4; if there are less servers running than the specified minimum number of servers, the queuing monitor 85 re-starts just as many servers to reach this minimum number of servers, lines 16-25 column 5).

As to claim 3, Gossler as modified further teaches exocusterly (the queuing monitor 85 is not part of the cluster of service units and servers, lines 11-59 column 3, Figs 2-3) and selectively deactivating one or more active members of the cluster (temporary servers will be terminated after finished processing the processes, lines 52-65 column 4).

As to claim 4, Gossler as modified further teaches identifying one or more active members of the cluster that are presently overwhelmed (if there are less servers running than the specified minimum number of servers, the queuing monitor 85 re-starts

just as many servers to reach this minimum number of servers, lines 16-25 column 5) at the application-layer.

As to claim 5, it is a method claim of claims 3-4. Therefore, it is rejected for the same reasons as claims 3-4 above.

As to claim 6, Gossler as modified further teaches exocusterly (the queuing monitor 85 is not part of the cluster of service units and servers, lines 11-59 column 3, Figs 2-3) and selectively activating one or more inactive members of the cluster (additional servers being added to the minimum number of active servers, lines 16-25 column 5).

As to claim 7, Gossler as modified further teaches identify one or more inactive members of the cluster that are not presently overwhelmed (additional servers were first inactive and then being active by the queuing monitor 85, lines 16-25 column 5) at the application-layer.

As to claim 8, it is a method claim of claims 6-7. Therefore, it is rejected for the same reasons as claims 6-7 above.

As to claim 9, it is a method claim of claims 3-4 and 6-7. Therefore, it is rejected for the same reasons as claims 3-4 and 6-7 above.

As to claim 10, Gossler as modified further teaches determining a present activity state of members of the cluster (monitoring the current state, lines 26-27 column 4).

As to claim 11, it is a method claim of claim 10. Therefore, it is rejected for the same reasons as claim 10 above. Gossler as modified further teaches tracking and

persisting the activity states of the members of the cluster (temporary servers will be terminated after finished processing the processes, lines 52-65 column 4).

As to claim 12, Gossler as modified further teaches the activity states include cluster states (monitoring the current state of the service units containing the servers, lines 26-27 column 4).

As to claim 13, Gossler as modified further teaches reporting (the queuing monitor 85 provides, line 52 column 4) a present activity state of one or more members of the cluster (the state indication determines whether the respective server will be applied permanently or only temporarily, lines 55—57 column 4).

As to claim 15, Gossler as modified further teaches reporting a present application layer state of one or more members of the cluster (the minimum number of servers for each service unit corresponds to the number of server processes within the service unit that should be permanently running, lines 4-7 column 4).

As to claim 20, it is a computer readable medium claim of claim 1. Therefore, it is rejected for the same reasons as claim 1 above.

As to claim 21, it is a method claim of claims 1-2. Therefore, it is rejected for the same reasons as claims 1-2 above.

As to claims 22-32 and 34, they are method claims of claims 3-13 and 15, respectively. Therefore, they are rejected for the same reasons as claims 3-13 and 15 above.

As to claim 37, it is a computer readable medium claim of claim 21. Therefore, it is rejected for the same reasons as claim 21 above.

As to claim 38, it is a computer readable medium claim of claims 1-2 and 10. Therefore, it is rejected for the same reasons as claims 1-2 and 10 above.

As to claims 39-43, they are system claims of claims 1-2, 4, 7 and 10, respectively. Therefore, they are rejected for the same reasons as claims 1-2, 4, 7 and 10 above.

As to claims 46-51, they are system claims of claims 1, 3-4, 6-7 and 10, respectively. Therefore, they are rejected for the same reasons as claims 1, 3-4, 6-7 and 10 above.

As to claim 54, it is a system claim of claims 1-2 and 10. Therefore, it is rejected for the same reasons as claims 1-2 and 10 above.

7. Claims 14, 16-19, 33, 35-36, 44-45, 52-53 and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gossler in view of Mangipudi, and further in view of Luzzi U.S Patent No. 6,321,263.

As to claim 14, Gossler as modified does not explicitly teach reporting historical record of the activity states of the server.

Luzzi teaches a system of monitoring the performance of a server computer from a client computer (Fig. 2) wherein the historical record of the activity state of the server (data on specific servers, lines 56-57 column 4) being reported (the server records of service being recorded in certain period of time and these records being stored in a central database, lines 6-16 and 43-62 column 5, lines 15-18 column 6).

It would have been obvious at the time the invention was made to a person of ordinary skill in the art to have modified Gossler reference as modified by Mangipudi reference to include the teachings of Luzzi reference because these records of servers' activities allow a user to have a better understanding about the system performance as disclosed by Luzzi (lines 6-16 and 43-62 column 5; lines 15-18 column 6).

As to claim 16, Luzzi further teaches reporting historical record of the application layer state (the transaction record information for a generated transaction record includes whether the application program successfully responded to the request and the response time of the application program, lines 10-14 column 6). Note the discussion of claim 14 above for the reason of combining references.

As to claim 17, Luzzi further teaches monitoring in one or more different application layer protocols (hypertext transfer protocol, line 63 column 8; transmission control protocol/internet protocol, lines 14 column 25). Note the discussion of claim 14 above for the reason of combining references.

As to claim 18, Luzzi further teaches an indicator of availability sent from the server being monitored (the server computer generates a service response indicating the process is being processed or not, lines 31-38 column 5). Note the discussion of claim 14 above for the reason of combining references.

As to claim 19, it is a method claim of claim 18. Therefore, it is rejected for the same reasons as claim 18 above.

As to claims 33 and 35-36, they are method claims of claims 14 and 16-17, respectively. Therefore, they are rejected for the same reasons as claims 14 and 16-17 above.

As to claim 44, it is a system claim of claim 11. Therefore, it is rejected for the same reasons as claim 11 above. Luzzi further teaches a database configured to store the activity states (central repository, line 16 column 6). Note the discussion of claim 14 above for the reason of combining references.

As to claim 45, Luzzi further teaches the monitor is protocol agnostic (hypertext transfer protocol, line 63 column 8; transmission control protocol/internet protocol, lines 14 column 25). Note the discussion of claim 14 above for the reason of combining references.

As to claims 52-53, they are system claims of claims 44-45, respectively. Therefore, they are rejected for the same reasons as claims 44-45 above.

As to claim 55, it is a system claim of claim 44. Therefore, it is rejected for the same reasons as claim 44 above.

As to claim 56, Luzzi further teaches multiple app-monitors (one or more client-based probes in the network, lines 41-42 column 6). Note the discussion of claim 14 above for the reason of combining references.

As to claim 57, Luzzi further teaches multiple cluster controls (client-based probes, line 45 column 6). Note the discussion of claim 14 above for the reason of combining references.

Response to Arguments

8. Applicant's arguments filed 6/30/2006 have been fully considered but they are not persuasive.

Applicant argued that the cited references do not teach several limitations of the independent claims (Remarks filed 6/30/2006). In response, the applicant argued new limitations that were not claimed before. However, these new limitations are still met by the cited references as disclosed in the claim rejections above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Ho whose telephone number is (571) 272-3762. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Friday, 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIM) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2194

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Any response to this action should be mailed to:

Commissioner for Patents

P.O Box 1450

Alexandria, VA 22313-1450

Or fax to:

- AFTER-FINAL faxes must be signed and sent to (571) 273 - 8300.
- OFFICAL faxes must be signed and sent to (571) 273 - 8300.
- NON OFFICAL faxes should not be signed, please send to (571) 273 – 3762

A.H
October 30, 2006


MICHAEL T. KIM
SUPERVISORY PATENT EXAMINER